

Application No.: 10/730344

Case No.: 59351US002

REMARKS

Claims 1-18, 26-28 and 30 remain pending in this application, claims 19-25 and 29 having been canceled. Reconsideration of all of the claims is courteously requested.

In the first Office Action, claims 7-12 were indicated to contain allowable subject matter. Independent claim 1 has now been rewritten to include the former limitations of claim 7, and claims 2-18 all now depend from claim 1. Consequently, claims 1-18 should now be allowed.

Claim 26 has been amended to recite that the liner has an occlusal section having a certain thickness, a gingival section having a certain thickness and a lingual section having a thickness that is greater than the thickness of the occlusal section and the gingival section. In addition, claim 26 has been amended to recite that the lingual section of the liner has at least one notch with an open lingual side. This construction provides a distinct advantage in that debonding of the appliance is facilitated.

More specifically, the open notch on the lingual section of the liner facilitates movement of the mesial section and the distal section of the ceramic body in directions toward each other. As such, the ceramic body easily fractures in a region along the channel that extends in the body in a generally occlusal-lingual direction. As the body fractures, the mesial section and/or distal section detach from underlying areas of the tooth. The presence of the notch reduces the force needed to bend the liner during fracture of the ceramic body, such that debonding is facilitated.

Such construction is neither taught nor suggested by the references of record. For example, in the Kawaguchi reference, there is no teaching of an appliance with a liner having a lingual section that is thicker than the gingival section and the occlusal section, and that is open on the lingual side. Specifically, in the embodiments shown in Figs. 4a, 5, 6a, 6c, 7a, 7b, 8a and 11, the lingual side of anything that could be deemed a notch is not open. In the remaining embodiments, drawings do not show a liner having a lingual section that is thicker than the gingival section or the occlusal section.

In the Hansen patent, the drawings do not show a ceramic appliance with a liner having a notch with an open lingual side. The Farzin-Nia patent and the Fukutomi patent do not show a ceramic appliance with a liner having a notch aligned with a channel to define a passageway.

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Another advantage of the present invention is that the liner tends to increase the strength of the appliance in regions of the ceramic body adjacent the lingual section. The elongated channel, extending in a generally occlusal-gingival direction, is useful for receiving orthodontic auxiliaries, but unfortunately the strength of the small ceramic body is reduced in areas near the channel. However, the liner, with its lingual section of increased thickness, helps increase the strength of the appliance in areas near the channel such that the likelihood that the appliance will inadvertently fracture during the course of treatment is reduced.

For the foregoing reasons, it is believed that this application is in full condition for allowance, and such action is respectfully requested.

Respectfully submitted,

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Date

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